

Calculating the inverse matrix of $\begin{pmatrix} 5 & 6 \\ 3 & 4 \end{pmatrix}$

rows							
(1)	5	6	1	0			
(2)	3	4	0	1			
(1a)	15	18	3	0		(1)*3 -> (1a)	
(2a)	-15	-20	0	-5		(2)*(-5) -> (2a)	
(1a)	15	18	3	0	*		
(2b)	0	-2	3	-5	1	(1a)*(1)+(2a)->(2b)	
(1b)	15	0	30	-45	9	(2b)*9+(1a)->(1b)	
(2b)	0	-2	3	-5	*		
(1c)	1	0	2	-3		(1b) : 15 -> (1c)	
(2c)	0	1	-3/2	5/2		(2b) : (-2) -> (2c)	

The inverse matrix of $\begin{pmatrix} 5 & 6 \\ 3 & 4 \end{pmatrix}$ is $\begin{pmatrix} 2 & -3 \\ -\frac{3}{2} & \frac{5}{2} \end{pmatrix}$